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News Bulletin of The Entomological Society of Victoria Inc.

THE ENTOMOLOGICAL SOCIETY OF VICTORIA (Inc)

MEMBERSHIP

Any person with an interest in entomology shall be eligible for Ordinary membership. Members of the Society include professional, amateur and student entomologisis, all of whom receive the Society's News Bulletin, the Victorian Entomologist.

OBJECTIVES

The aims of the Society are:

(a) to stimulate the scientific study and discussion of all aspects of entomology,
(b) to gather, disseminate and record knowledge of all identifiable Australian insect species,
(c) to compile a comprehensive list of all Victorian insect species,
(d) to bring together in a congenial but scientific atmosphere all persons interested in entomology.

MEETINGS

The Society's meetings are held at room AG17, La Trobe University Carlton Campus, 625 Swanston Street, Carlton, Melway reference Map 2B E10 at 8 p.m. on the third Friday of even months, with the possible exception of the December meeting which may be held earlier. Lectures by guest speakers or members are a feature of many meetings at which there is ample opportunity for informal discussion between members with similar interests. Forums are also conducted by members on their own particular interest so that others may participate in discussions.

SUBSCRIPTIONS

Ordinary Member	$20.00
Country Member	$16.00 (Over 100 km from GPO Melbourne)
Student Member	$12.00
Associate Member	$ 5.00 (No News Bulletin)

No additional fee is payable for overseas posting by surface mail of the news bulletin. Associate Members, resident at the same address as, and being immediate relatives of an ordinary Member, do not automatically receive the Society's publications but in all other respects rank as ordinary Members.

Cover design by Alan Hyman.

Cover illustration of Magpie Moth or Senecio Moth larvae, *Nyctemera amica* by Cait Symington.

MINUTES OF THE ANNUAL GENERAL MEETING, 21 JUNE 1996

The Vice President, A. Kellehear, opened the General Meeting 8.02 pm

Present: C. Dickson, D. Dobrosak, I. Endersby, A. & E. Farnworth, A. Kellehear, M. Linger, R. MacPherson.

Visitors: V. MacPherson

Apologies: P. Carwardine, D. & P. Meehan.

Minutes: Minutes of the 16 June 1995 Annual General Meeting [*Vic. Ent.* 25(4):61] were accepted (I. Endersby/E. Farnworth).

Treasurer's Report:

The Treasurer reported that the Society's books were audited [refer *Vic. Ent.* 26(3):56-57]. The Treasurer noted that during the audited period, the two award accounts (Le Souëf Award and Junior Encouragement Award) had been merged to minimise bank charges.

Committee Reports:

No reports were given as the Conservation and ENTRECS Committees were not constituted last year and no Le Souëf Award nominations were received during the past year.

Nominations for Council Positions:

The Vice President called for nominations from the floor as no written nominations had been received. The Positions listed below were filled. All filled positions received only one nomination and were therefore elected unopposed.

President:	Vacant
Vice President:	Vacant
Secretary:	Vacant
Treasurer:	I. Endersby
Editor:	D. Dobrosak
Public Officer:	I. Endersby
Excursion Secretary:	P. Carwardine
Councillors:	R. Field, A. Kellehear, M. Linger, R. MacPherson, D. Meehan, S. Smith,

The Vice President informed the meeting that the issue of the unfilled positions would be addressed at the July Council meeting. The Vice President also called for expressions of interest for membership of the Conservation and ENTRECS committees. No expressions of interest were received.

The meeting was closed by the Vice President at 10.15 pm.

MINUTES OF THE GENERAL MEETING, 21 JUNE 1996

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Present: C. Dickson, D. Dobrosak, I Endersby, A. & E. Farnworth, A. Kellehear, M. Linger, R. MacPherson.

Visitors: V. MacPherson

Apologies: P. Carwardine, D. & P. Meehan.

Minutes: Minutes of the 19 April 1996 General Meeting [*Vic. Ent.* 26(3):41-42] were accepted (R. MacPherson/A. Farnworth).

Treasurer's Report: The Treasurer presented the financial statement as of 21 June 1996:

Account balances stand at: General Account $4,719; Le Souëf Award Account $3,1554. Membership is 106 including 6 Associate members and 10 subscribers.

Excursion Report:

The Vice President drew the attention of those present that the Society will be holding its August General Meeting at the Museum of Victoria's Abbotsford Annex. A short meeting will be held with the remainder of the night available for members and visitors to view the Museum's facilities and Collections. Dr. Ken Walker has kindly agreed to host the visit. Visitors should arrive early as the doors will only be open for a short time to admit visitors at 8 00 pm sharp!

Guest Speaker

Dr. R. Field, head of Natural Sciences at the Museum of Victoria, presented a talk on the Gallery of Life exhibit which will form a central architectural component of the new Museum Buildings to be built at Carlton. Dr. Field backed up his talk with an excellent series of colour slides, overhead displays and samples of promotional brochures.

The new Museum of Victoria buildings will be built within the existing Exhibition Reserve within the Carlton Gardens just north of the Melbourne Central Business District. The Gallery of Life will consist of a large semi-enclosed area with flora and fauna of a temperate rainforest. The north facing roof of the Gallery of Life will be approximately 40m high, allowing the establishment of the taller Victorian eucalypt species such as Mountain Ash.

It is expected that the new Museum at Carlton will be a leader in the area of design of future museums and depart from the traditional "stuffed animal" presentations of earlier Museums by virtue of its living display in the Gallery of Life.

General Business: A. Sealy and A. Arnold were elected to membership.

Exbibits:

R. MacPherson displayed a "wet preserved" House Centipede. M. Linger informed the meeting that Rural Books at 166 Wellington Parade, East Melbourne have a small range of entomological books which may be of interest to members. It was also noted that Tim New will shortly have a new book released titled "Name that Inseet".

In closing the meeting A. Kellehear moved a vote of thanks to P. Carwardine for his services over the last three years as President. (A. Kellehear/P. Grey).

The meeting was closed by the President at 9:51 pm.

MINUTES OF COUNCILLOR'S MEETING, 19 JULY 1996

Present: D. Dobrosak, I. Endersby, A. Kellehear, R. MacPherson

As a quorum was not attained, the following notes represent the matters discussed:

Office Bearers:

A. Kellehear agreed to accept the position of President on the condition that he may need to resign later in the year due to his planned relocation away from Melbourne. D. Dobrosak offered to fill the position of Secretary on a temporary basis until another nomination is received.

Attendance at General Meetings:

The lack of public awareness of the Society was discussed and believed to be a factor in the lack of growth in membership. It was noted that the Museum of Victoria's "Skydancers" exhibition held in 1991 was identified as an event which brought new members and Councillor's to the Society. With this in mind, Council will attempt to gain approval from the Zoological Gardens to have a manned, promotional stand for the Society at the exit of the Butterfly House. The proposed date is Saturday, 21 September from 1 to 3 pm.

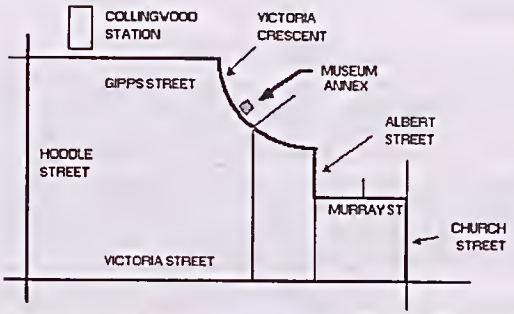
Following on from the "Zoo" day, it is proposed to arrange a speaker on the topic of "Butterflies" for the October general meeting.

Excursions:

Mark Jenkins, the Ecologist at the Royal Botanic Gardens, Cranbourne has requested the Society to visit and survey the entomological fauna at the Cranbourne Gardens. Plans to take up this offer will be addressed at the next two council meetings.

On Saturday 31 August, 11 am, the Society will be holding an excursion to view David Holmes collection. The address is 33 Fig Street, Dromana. Please bring lunch. Tea and coffee will be provided. Collecting in the Peninsula area will be held in the afternoon. Thanks are extended to David and Joyce Holmes for extending their hospitality to the Society.

The August General Meeting and excursion will be held at the Abbotsford Annex of the Museum of Victoria. Details are shown below:



The August meeting on Friday 16th August will be in the form of an excursion to the Museum of Victoria Annexe at 71 Victoria Crescent, Abbotsford. Transport by train to Collingwood, tram to Victoria and Church Streets, or there is on street parking. MELWAY 2D. Admittance 8PM SHARP.

BOOK REVIEW

Bring Back the Butterflies. Butterfly gardening for Western Australians. Robert W. Hay, Terry F. Houston, Andrew A.E. Williams & Matthew R. Williams; Editor: T.F Houston (WAISS Inc.). Western Australian Insect Study Society Inc. & Western Australian Museum, 1994. 72pp. $9.95

Ongoing alterations to the environment through forestry, farming, residential development and even regular parkland maintenance within urban areas may create (or has created) a hostile habitat to surviving (and lost) insect inhabitants. The butterfly is no exception. This slim, soft covered, inexpensive book depicts a familiar Perth beauty, one of the state's 116 species clinging tenuously to a remnant herb patch against an ominous backdrop of the invasive metropolis. Aptly portraying the urban butterfly's future plight, it is the authors' intention to arouse interest in breeding resident species and stimulate regard for their long term survival. Through exposure to this book, it is hoped that the local gardener will, in time, become butterfly-conscious and devote a small area of garden to, perhaps less appealing, but essential, larval shrubs, grasses or herbs. Its title indicates the focus on occidental fauna, but the work also has the potential to foster enthusiasm for butterfly gardening nationally.

The introductory section (pp.1-13) covers the fundamentals of butterfly biology and, in so doing, provides answers to the popularly asked questions which the new 'butterfly farmer' will want to know. Topics covered include the differences between butterflies and moths, butterfly life cycles, a candid chapter on how to sex butterflies, the ecological role of the butterfly, some basic taxonomy and even some legal considerations of use to the responsible gardener. The bulk of the book (pp.14-52) centres on rearing butterflies, and includes about 35 individual species accounts, divided into three groups according to their ease of rearing and state distribution.

An annotated check-list of the Western Australian species is presented (pp.53-58) which includes their distributions, segregated into five zoogeographic demarcations (as defined on map on p.54), and extralimital state distributions where applicable. A useful 'Help' section lists relevant contact groups for specialist butterfly information, advice on commercial availability of host plants or queries on legal aspects of the collection, keeping or trading of fauna and flora. A list of 'Further Reading' is followed by a two page glossary defining 21 potentially unfamiliar words which the non-biologist will encounter in his study. A general index and an index of plant names concludes the book.

An adeptly written text, it is carefully researched and extremely well targeted to a general audience. Only a single typographical error was encountered - the specific epithet *misippus* is misspelled on p.57. The comprehensive instructions and hints on rearing common species are indispensable, and detail many pitfalls and traps into which the unwary may stumble - frequently those which the specialist takes for granted or considers trivial and may neglect to instruct! One matter overlooked, however, is that of the irritating hairs or spines familiarly associated with some moth caterpillars. Although this kind of defence mechanism is rare among the larvae of butterflies the larval spines of one northern species, the Danaid Eggfly, are known to penetrate skin causing moderate itching and inflammation.

The text is furnished with eight color plates of adults (56 species) and two of painted juvenile stages (11 species). All are correctly identified except, apparently, for three adults (Plate 4, fig's 16-18) which are said to be *Jalmenus icilius*. To me these look like the 'dark form' of *J. inous* which exists in some populations about Perth - eg. Mundaring Dam. The male upperside (fig. 16) shows the smudgy tornal spots characteristic of *J. inous*. In WA males of *J. icilius* the

orange tornal spots above are prominent, and in both sexes the central metallic areas are paler and, beneath, the ground color is lighter than those illustrated. In all respects, the illustrations of adults are brilliant quality with choice material having been selected. Of interest to the specialist are those of an undescribed *Ogyris* sp. affinity *idmo* illustrated for the first time.

Although not promoted as a field guide for the identification of species in WA, the book is adequate for this purpose in, at least, the south-west of the state. Germane to this use, species taxonomy is more or less in agreement with current revisionary literature. *Elodina walkeri*, for example, is in accordance with the 1993 revision, but some anachronisms have slipped through dating from the last popular text of 1981. The Blue Tiger is still under *Danaus*, rather than *Tirumala* with which it has been combined since 1984, and the Tailed Emperor (*Polyura sempronius*) cited under *P. pyrrhus* (from Ambon) was raised to specific rank in 1982. In a few cases the distributions beyond WA (as per check-list) are outdated (eg. the Orange Palm Dart has invaded Victoria), and some subspecies have been overlooked (eg's. only one of the two Queensland subspecies of *Graphium eurypylus* and *Theclinesthes miskini* are listed), albeit, such inaccuracies are inconsequential.

With its main focus on butterfly gardening the book contains all the essential information for the novice (living in WA) to commence his/her own 'butterfly sanctuary'. And, assisted by the clear illustrations he or she should have no great difficulty recognising resident and visiting species, at close range, as they come to seek nectar or establish perch sites near their planted larval hosts. Finally, it is also useful to the eastern Australian lepidopterist who will cherish the quality illustrations of occidental subspecies and forms not otherwise readily available in the literature, and may also note the sprinkling of new larval foodplants and interesting adult behavioral notes contained therein.

Kelvyn L. Dunn

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CORRIGENDUM

Faithfull, I., 1995. Invasion of Victoria by the African black beetle *Heteronychus arator* (Fabricius) (Searabaeidae: Dynastinae) with notes on its dispersal and Australian distribution. *Victorian Entomologist* 25(4):64-72.

In this article I suggested that a 20 October 1948 record of the species with label locality data "University" may have been collected at Melbourne University in Parkville, Victoria. K.L.Dunn, who is familiar with the collection from which the record was obtained, has informed me that the material was taken by Lindsay Crawford at Sydney University, New South Wales. It does not represent the earliest record of this species from Victoria.

Ian Faithfull
5/30 Finlay St., Frankston, Vic., 3199

BUTTERFLY LARVAL FOOD PLANT LIST FOR THE NORTHERN TERRITORY AND THE KUNUNURRA DISTRICT IN WESTERN AUSTRALIA

C.E. MEYER
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Abstract

A list of larval food plants for butterflies from the Northern Territory and the Kununurra district in Western Australia is presented. Existing records are confirmed and new food plant records given. Ant associations for some Lycaenidae are also noted.

Introduction

Butterfly larval food plants in eastern Australia are generally well documented, however, little has been published on the butterflies from the Northern Territory (NT) or from the Kununurra district in Western Australia. During the period June 1991 to June 1995, I actively collected butterflies from this region concentrating on identifying life history information during the later years. The list presented here summarises the data that I accumulated during that period and unless otherwise stated, all the immature stages of the butterfly were found on the plants and successfully reared to adult. Those records with NLH annotated after the butterfly's name represent new life history information. These records will also be published in a more detailed life history paper in due course.

Figure 1

The food plant records from the Kununurra district have locational data annotated in curly brackets after the plant name. All other food plant records presented in this paper were

found at various localities within the shaded region illustrated at Figure 1. Where a food plant has been previously recorded, the number(s) provided in the square brackets after the plant name refers to the relevant reference(s) provided at the end of this paper.

The following key applies to the food plant records presented here:

@ previous record for the NT [Reference],
# previous record from eastern Australia [Reference],
+ new food plant record,
o oviposition record, and
* introduced plant.

HESPERIIDAE

Hasora chromus chromus Butler
Pongamia pinnata (L.) Pierre (Fabaceae) [1][3]

Hasora hurama hurama Cramer
Derris trifoliata Lour. (Fabaceae) [1][3]

Badamia exclamationis Fabricius
+ *Terminalia sericocarpa* F. Muell. (Combretaceae) {Black Rock Pool}

Hesperilla crypsigramma Meyrick and Lower
Scleria sphacelata F. Muell. (Cyperaceae) [1][3]

Hesperilla sexguttata Herrich-Schaffer
Cyperus javanicus Houtt. (Cyperaceae) [1]

Mesodina gracillima Edwards
@ *Patersonia macrantha* Benth. (Iridaceae) [1][4]

Taractrocera ina Waterhouse
+* *Panicum maximum* Jacq. (Poaceae)

Suniana lascivia larrakia Couchman
+* *Panicum maximum* Jacq. (Poaceae)

Suniana sunias sauda Waterhouse
#* *Panicum maximum* Jacq. (Poaceae) [1][3]

Telicota augias agrilus Waterhouse
+ *Flagellaria indica* L. (Flagellariaceae)

Borbo impar lavinia Waterhouse NLH
+* *Panicum maximum* Jacq. (Poaceae)
+* *Pennisetum pedicellatum* [Mission Grass] Trin. (Poaceae)

Pelopidas lyelli lyelli Rothschild
+* *Panicum maximum* Jacq. (Poaceae)
+* *Pennisetum pedicellatum* [Mission Grass] Trin. (Poaceae)

PAPILIONIDAE

Graphium eurypylus nyctimus Waterhouse and Lyell
\+ *Melodorum rupestre* Jessup (Annonaceae)
#* *Anona muricata* [Sour Sop] L. (Annonaceae) [1][3]
\+ *Miliusia brahei* (F. Muell) Jessup (Annonaceae)
o *Polyaulax cylindricarpum* (Burck) Backer (Annonaceae)
\# *Polyalthia australis* (Benth.) Jessup (Annonaceae) [3][11]

Papilio fuscus canopus Westwood
@ *Micromelum minutum* (G.Forster) Wight & Arn. (Rutaceae) [1][3]
@ *Glycosmis pentaphylla* (Retz.) DC. (Rutaceae) [1][3]

Papilio demoleus sthenelus W.S. Macleay
\+ *Psoralea balsamica* F. Muell. (Psoraleaceae)
\+ *Psoralea badocona* (Blanco) Blanco (Psoraleaceae)

Cressida cressida cassandra Waterhouse and Lyell
\# *Aristolochia holtzei* F. Muell. (Aristolochiaceae) [3][11]
\+ *Aristolochia* spp. (Aristolochiaceae) a local vine found on Channel Island in Darwin harbour (see Herbarium record D50244 Channel Island).
\+ *Aristolochia tagala* Cham. (Aristolochiaceae) I introduced this plant into my garden as it does not occur naturally in the NT.

PIERIDAE

Catopsilia pomona pomona (Fabricius)
\# *Senna alata* (L.) Roxb. (Caesalpiniaceae) [6]
+* *Senna siamea* Lam. (Caesalpiniaceae)

Catopsilia scylla etesia Hewitson
\+ *Senna leptoclada* (Benth.) Randell (Caesalpiniaceae) {Hidden Valley}
\+ *Senna surattensis* Burman f. (Caesalpiniaceae)

Elodina walkeri Butler
\+ *Capparis sepiaria* (L.) (Capparidaceae)

Delias argenthona fragalactea Butler
@ *Decaisnina signata* (Benth.) Tieghem (Loranthaceae) [14]

Anaphaesis java teutonia Fabricius
\+ *Capparis sepiaria* (L.) (Capparidaceae)

Cepora perimale scyllara W.S. Macleay
\+ *Capparis sepiaria* (L.) (Capparidaceae)

Appias paulina ega Boisduval
\+ *Drypetes deplanchei* (Brong. & Gris) Merr.(Euporbiaceae)

NYMPHALIDAE

Danaus genutia alexis Waterhouse and Lyell
@ *Sarcostemma esculentum* (L.f.) Holm (Asclepiadaceae) [8]
{Ivanhoe Crossing}

Danaus chrysippus petilia Stoll
@ *Sarcostemma esculentum* (L.f.) Holm (Asclepiadaceae) [8] {Ivanhoe Crossing}
# *Cynanchum carnosum* (R.Br.) Schltr. (Asclepiadaceae) [1][3]

Danaus affinis affinis Fabricius
Cynanchum carnosum (R.Br.) Schltr. (Asclepiadaceae) [1][3]

Euploea core corinna (W.S. Macleay)
+ *Ficus virens* Aiton var. *virens* [Ban Yan] (Moraceae)
# *Gymnanthera nitida* R.Br. (Asclepiadaceae) [1][3][10][12]
@ *Sarcostemma esculentum* (L.f.) Holm (Asclepiadaceae) [8] {Ivanhoe Crossing}

Euploea sylvester pelor Doubleday **NLH**
+ # *Gymnema geminatum* R.Br. (Asclepiadaceae) [3][11]

Euploea darchia darchia (W.S. Macleay) **NLH**
+ # *Malaisia scandens* (Lour.) Planchon (Moraceae) [1][3][5][6]

Hypocysta adiante antirius Butler
o * *Urochloa mosambicensis* (Hack.) Dandy (Poaceae)

Melanitis leda bankia Fabricius
#* *Panicum maximum* Jacq. (Poaceae) [2][3]
+* *Pennisetum pedicellatum* [Mission Grass] Trin. (Poaceae)

Hypolimnas misippus Linnaeus
Portulaca oleracea [Pig Weed] L. (Portulacaceae) [1][3]

Junonia orithya albicincta Butler
Asystasia gangetica (L.) T. Anderson (Acanthaceae) [1][3]

Cethosia penthesilea paksha Fruhstorfer
@ *Adenia heterophylla* subsp. *australis* (DC.) W. Wilde (Passifloraceae) [1][3]

Phalanta phalantha araca Waterhouse and Lyell
@ *Flacourtia territorialis* Airy Shaw (Flacourtiaceae) [3][11]

Acraea andromacha andromacha Fabricius
Adenia heterophylla subsp. *australis* (DC.) W. Wilde (Passifloraceae) [1][3]

LYCAENIDAE

Hypochrysops ignitus erythrinus Waterhouse and Lyell
Planchonia careya (F.Muell.) Knuth (Lecythidaceae) [3][13]
+ *Glochidion apodogynum* Airy Shaw (Euphorbiaceae)
+ *Smilax australis* R.Br. (Smilacaceae)
# *Alphitonia excelsa* (Fenzl) Benth. (Rhamnaceae) [1][3]
+ *Brachychiton paradoxus* Schott & End. ['as *paradoxum*'] (Sterculiaceae)

Larvae tended by the coconut ant *Iridomyrmex* sp.

Hypochrysops apelles apelles Fabricius
\+ *Lumnitzera racemosa* Willd. (Combretaceae)

Larvae associated with small jet black ant *Crematagaster* sp.

Arhopala centaurus asopus Waterhouse and Lyell
@ *Terminalia catappa* L. (Combretaceae) [3]
# * *Lagerstroemia speciosa* [Pride of India] Pers. (Lythraceae) [3][13]
\+ *Maranthes corymbosa* Blume (Chrysobalanaceae)
\+ *Buchanania obovata* [Green Plum] Engl. (Anacardiaceae)

Tended by green tree-ants *Oecophylla smaragdina*

Arhopala micale amydon Waterhouse
\+ *Calophyllum inophyllum* [Beauty Leaf] L. (Clusiaceae alt. Guttiferae)

Tended by green tree ant *Ocephylla smaragdina*

Ogyris amaryllis hewitsoni Waterhouse
\+ *Amyema thalassium* Barlow (Loranthaceae) growing on *Rhizophora stylosa* [Stilt rooted mangrove] Griffith (Rhizophoraceae)

Tended by *Crematagastor* sp.

Hypolyceana phorbas ingura Tindale
\+ *Smilax australis* R.Br. (Smilacaceae)
\# *Clerodendrum floribundum* R.Br. (Verbenaceae) [1][3]

Tended by green tree ant *Ocephylla smaragdina*

Virachola smilis dalyensis Le Souef and Tindale
@ *Strychnos lucida* R.Br. (Loganiaceae) berries [1][3]

Anthene seltutus affinis Waterhouse and Turner
\# *Pongamia pinnata* (L.) Pierre (Fabaceae) [3][13]
\+* *Delonix regia* [Poinciana] (Boj. ex Hook) Raf. (Caesalpiniaceae)

Tended by green tree ant *Ocephylla smaragdina*

Anthene lycaenoides godeffroyi Semper
\# *Senna surattensis* Burman f. (Caesalpiniaceae) flower-buds and new growth [3][13]
\# *Pongamia pinnata* (L.) Pierre (Fabaceae) [1][3]

Sometimes associated with small black ant *Crematagaster* sp.

\+ *Flagalleria indica* L. (Flagellaricaceae) flower-buds

Sometimes associated with two other subspecies of *Crematagastor* ant

\# *Cupaniopsis anarcardioides* (A. Rich.) Radlk. (Sapindaceae) flower-buds [1][3]
\+ *Briedelia tomentosa* Blume [as '*Bridelia*'](Euphorbiaceae) flower-buds and new growth

Candalides gilberti Waterhouse
@ *Decaisnina signata* (Benth.) Tieghem (Loranthaceae) flowers and new growth [9]

Sometimes associated with *Crematagastor* ants

Nesolyceana urumelia Tindale
@ *Boronia lanceolata* F. Muell. (Rutaceae) [1][3]

Sometimes associated with the small black ant *Monomorium* sp.

Nacaduba kurava felsina Waterhouse and Lyell **NLH**
\+ *Embelia curvinervia* (L.f.) Holm. (Myrsinaceae) flower-buds and new growth

Prosotas dubiosa dubiosa Semper
\+ * *Dalbergia sissoo* Roxb. (Fabaceae) flower-buds

Theclinesthes sulpitius Miskin
@ *Halosarcia indica* (Willd.) Paul G. Wilson (Chenopodiaceae) [7]
# @ *Tecticornia australasica* (Moq.) Paul G. Wilson (Chenopodiaceae) [1][3][7]

Jamides phaseli Mathew
\+ *Pongamia pinnata* (L.) Pierre (Fabaceae) flower-buds

Catochrysops panormus platissa Herrich-Schaffer
\+ *Flemingia lineata* (L.) W.T. Aiton (Fabaceae) flower-buds

Euchrysops cnejus cnidus Waterhouse and Lyell
o* *Vigna radiata* var. *sublobata* (Roxb.) Verdc. (Fabaceae)

Freyeria trochylus putli Kollar
\+ *Flemingia lineata* (L.) W.T. Aiton (Fabaceae)

Larva were associated with two ants (i) large red/black ant *Polyrhachis schenii* (ii) small black ant *Ochetellus* sp. nr. *glaber*

Acknowledgements

I wish to thank Ian Cowie of the Darwin Herbarium, Palmerston and Bob Harwood of Greening Australia, Darwin for their valued assistance in food plant identifications, Dr Alan Anderson of CSIRO, Darwin for ant identifications and Dr Michael Braby ANIC, Canberra for his constructive comments on the draft manuscript.

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A PRELIMINARY LIST OF THE BUTTERFLIES OF PETFORD, NORTH QUEENSLAND, WITH A BIOLOGICAL NOTE ON *PROEIDOSA POLYSEMA* (HESPERIIDAE; TRAPEZITINAE)

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Abstract:

A list is presented of butterflies recorded from the Petford district in the central-west of North Queensland during December, 1995. Petford is a known locality for *Proeidosa polysema* Waterhouse and notes are given on its biology and scattered distribution throughout the tropical arid zone of northern Australia.

Introduction:

Petford is a small mining and grazing settlement, approximately 140 km west-south-west of Cairns, northern Queensland, along the Mareeba-Chillagoe road. At the turn of the century it was a larger town servicing mining interests, and an important railway junction to the western districts. Although the area is not unknown to Queensland entomologists, published records of the Lepidoptera seem scant for this locality. A few kilometres to the west of Petford the Chillagoe road and railway line wind through a range rocky hills and scarps. The geology of the district appears quite complex, with shales and sandstones, conglomerates and some granites. The vegetation is at times somewhat sparse and often subject to drought conditions, especially during long, dry winters. Open *Eucalyptus* forests and scrublands dominate the landscape, but perhaps suprisingly, a good ground cover of a variety of heathland shrubs, herbs and grasses occur on the hill-slopes. The ravines and creek-beds support a lush growth following summer storm-rain. Accordingly insect activity dramatically increases during favourable seasons.

My two previous visits to Petford, made in relatively dry periods during October 1971 and January 1988, were generally non-productive. However a few larvae of *Proeidosa polysema* were collected on the foodplant (*Triodia* sp.). This interesting skipper was previously known from only a few specimens from northern Queensland and the Northern Territory, in fact the type-locality is Petford; the holotype (a female) was collected by the renowned lepidopterist F.P. Dodd in February, 1908 during a trip to the Northern Territory. The life history of this skipper was discovered in the early 1970's at Blackdown Tableland, central Queensland (see Atkins, 1973), and since then many more records have established a more or less continuous range across northern Australia above the Tropic of Capricorn. At least two distinct forms are represented in the south-eastern, northern, central and western sectors of the range of *polysema*, and the taxonomic status of these are under review.

This present list of butterflies represents a two-day trip to Petford in mid-December, 1995. Good spring and summer rains preceded my visit and the country was pleasantly transformed; but I believe I was too late for the flowering of many herbs that attract butterflies. Two main sites were visited: (a) a sandy, tree-lined creek about 5 kms west of Petford, and (b) slopes and foothills adjacent to a higher ridge about 10 kms west of Petford. Both sites were close to the Chillagoe road.
Several species listed (c) are wide-ranging and/or migratory in habit. My previous trips are indicated by ' (d)'. Observations in late summer, no doubt would substantially increase this list.

HESPERIIDAE

Trapezites macqueeni Kerr and Sands (b)
Trapezites eliena (Hewitson) (d)
Trapezites iocchus (Fabricius) (a, b)
Toxidia peron (Latreille) (d)
Toxidia thyrrus Mabille (a)
Neohesperilla xiphiphora (Lower) (a)
Neohesperilla xanthomera (Meyrick and Lower) (b)
Proeidosa polysema (Lower) (b)
Hesperilla crypsigramma (Meyrick and Lower) (b)
Hesperilla sexguttata Herrich-Schaffer (a)
Taractrocera anisomorpha (Lower) (a,b)
Telicota ancilla ancilla (Herrich-Schaffer) (b)

PAPILIONIDAE

Graphium sarpedon choredon (C. and R. Felder) (c,d)
Papilio (Princeps) aegeus aegeus Donovan (c,d)
Papilio demoleus sthenelus W.S. Macleay (c,d)
Cressida cressida cressida (Fabricius) (c)

PIERIDAE

Catopsilia pyranthe crokera (W.S. Macleay) (c)
Catopsilia pomona pomona (Fabricius) (c)
Catopsilia scylla etesia (Hewitson) (c)
Eurema hecabe phoebus (Butler) (c)
Eurema smilax (Donovan) (c,d)
Eurema herla (W.S. Macleay) (c)
Elodina padusa (Hewitson) (c)
Anaphaeis java teutonia (Fabricius) (c)
Cepora perimale scyllara (W.S. Macleay) (c)

NYMPHALIDAE

Danaus plexippus plexippus (Linnaeus) (c)
Danaus chrysippus petilia (Stoll) (c)
Euploea core corrinna (W.S. Macleay) (c)
Melanitis leda bankia (Fabricius) (a)
Xois arctoa arctoa (Fabricius) (a)
Hypolimnas bolina nerina (Fabricius) (a)
Vanessa kershawi (McCoy) (c)
Junonia orithya albicincta Butler (c)

LYCAENIDAE

Ogyris amaryllis meridionalis Bethune-Baker (b)
Jalmenus etchhorni Staudinger (b)
Candalides geminus Edwards and Kerr (b)
Nacaduba biocellata biocellata (C. and R. Felder) (c)
Theclinesthes miskini eucalypti Sibatani and Grund (a,b)
Jamides phaseli (Mathew) (a)
Lampides boeticus (Linnaeus) (a,b)
Zinina labradus labradus (Godart) (c)
Famegana alsulus alsulus (Herrich-Schaffer). (b)

Discussion

The list above is far from a comprehensive survey of butterflies of the area, but, for some uncommon and local species it represents interesting and new intermediate records for northern Queensland.

Trapezites maqueeni is a local species, found from disjunct localities in the dry country of eastern Cape York. The distribution of this skipper is from near Townsville (Mount Stuart) (Woodger, 1990) north to the Archer River on Cape York (Daniels, 1991). 2 males and 2 females were collected around the dry hill-slopes west of Petford. One female was feeding on *Melaleuca* flowers. At least 4 species of *Lomandra*, the foodplant of eastern *Trapezites* species, was observed in the area.

Trapezites iacchus is a relatively common species in the coastal woodlands of northern Australia. This record at Petford is quite inland for the species. One female was observed on the hill-slopes, but several adults were found along the stream-banks, and larvae and pupae were numerous on *Lomandra hysterix*. This *Lomandra* is easily confused with *L. longifolia* but the leaves of the former species are soft and pliable and have long pointed tips. (*L. hysterix* is not uncommon along rainforest swamps, streams and rivers in coastal areas such as Tam O'Shanter Reserve [Mission Beach], Tully Gorge, Mosman National Park and Daintree).

Toxidia thyrrhus, is local to damp grassy areas, especially along the edges of streams and creeks. It is not uncommon in many localities from west of Kuranda to Dimbulah. Petford represents a western locality for this species. This skipper was also observed at Emu Creek, 10 km east of Petford.

Neohesperilla xiphiphora is a generally uncommon species, found more often in post fire regrowth areas of woodland in north Queensland (Johnson et. al., 1994). This skipper was not uncommon (especially females) at Petford in sandy, grassy creek beds where they rested on the ground in sunny glades or, during the heat of the day, on shrubs or overhanging branches of trees close to flowing water. The species is also recorded nearby from Emu Creek (J. Balderson, pers. comm.).

Hesperilla crypsigramma occurs throughout the drier coastal areas of Queensland as far inland as Bogantungan in the central highlands (Atkins, 1978). One of its foodplants *Scleria mackaviensis* occurs commonly on the rocky slopes at Petford. Two males and a female were collected in the hills on this present trip, and several males in 1971.

Hesperilla sexguttata is not uncommon in the drier western slopes of the central and northern woodlands of Queensland. Its foodplant (*Cyperus javanicus*) usually grows along sandy flats

and creek- beds. Adults of this skipper were not seen, but larvae were collected and old pupal shelters observed in creek-beds near Petford.

Proeidosa polysema, as previously mentioned, is of special taxonomic interest at Petford. Its larvae normally feed on the softer open-leafed and stieky species of *Triodia*. I have not seen this grass at the settlement itself, however *Triodia pungens* is common in the surrounding hills and along the railway line. *P. polysema* normally flies close to its foodplant, and it seems probable that the female holotype of this skipper was collected by Dodd near the railway junction (now a museum) in the hills about 6km east of Petford (near the road turn-off to Herberton), where the *Triodia* still grows. Once again (as with previous visits) no adults were seen, but three nearly mature larvae were found on *T. pungens* growing on slopes and ridges 10 kms west of Petford.

Cressida cressida was common during this visit. Males and females were making courtship flights around flowering *Melaleuca* bushes, and mating pairs were feeding from the flowers in considerable numbers. Several other butterflies were attracted to these bushes, inluding *Catopsilia, Eurema, Anaphaeis, Junonia, Euploea, Jalmenus, Nacaduba and Neohesperilla.* Other insects feeding on the flowers included several species of bees, beetles and flies. Mantids and assassin bugs awaited their prey on the blossoms.

Ogyris amaryllis was observed on a previous visit (1971), flying around mistletoe on *Alphitonia excelsia* trees (a typical habitat for *Hypochrysops delicia duaringae*). A larva subsequently collected from under the bark of one of these trees was reared to a male *O. amaryllis*. The specimen (now in ANIC collection) was somewhat aberrant in having slightly 'delicate-looking' squared wings. The host ant was a *Crematogaster* sp. *Ogyris* were not observed on this present trip, but various species of mistletoe are common throughout the hills around Petford.

Jalmenus eichhorni is known from Mount Garnet, to the south, and Mount Molloy, to the north-east, of Petford, these being the known southern limits of its range. 2 males were collected 5 km west of Petford, an intermediate but inland locality. The breeding colony was not discovered, however several species of wattle occur in the area, ineluding *Acacia crassicarpa,* one of the recorded foodplanst of *J. eichhorni*.

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SOME INTERESTING BUTTERFLY OBSERVATIONS IN NORTHERN QUEENSLAND

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Two very interesting observations of butterfly behaviour were made by me during the 1995/1996 summer. The first involved cross species mating behaviour, including copulation, and was observed in my garden in Townsville. On two separate occasions (in January, 1996) a male *Papilio (Princeps) aegeus* was seen courting a female *Ornithoptera (Troides) priamus*. The male was flying close to the female, which was displaying a typical fluttering action, and occasionally would fly under and over the female. The female seemed to be interested and was seen to hover on numerous occasions. On one of the observation days the pair were seen fully coupled with the female birdwing flying and the male orchard butterfly being carried. Copulation was observed to continue for a short time before the pair soared out of sight and observation ceased. Normally the garden has several resident adults and others emerge regularly from the many colonies established on 15 - 20 vines in the garden. On this occasion no male birdwings were present in the garden but a female had been seen for several days. I have not previously seen such a cross-species copulation and I wonder how uncommon it may be.

The second observation was at 40 Mile Scrub National Park, about 65 km south of Mt Garnet, northern Queensland. On the 7th January 1996, at a time when a cyclone was crossing the Gulf of Carpentaria and bringing rain to extensive areas of inland northern Queensland, I made a brief visit to this National Park. The area had received rain and the bitumen road which runs through the park was wet and very steamy. Gathered on this wet bitumen were large aggregations of male *Papilio (Princeps) aegeus*. These appeared to have just emerged and were clustered together imbibing liquid from the road in clusters of up to 45 individuals. No females were present on the road. Also imbibing were very large clusters of *Graphium eurypylus, Catopsilia pyranthe, Eurema hecabe, Cepora perimale,* and *Appias paulina*. Within the vine thicket were numerous female *P. aegeus* and also very large numbers of larvae and pupae of *Graphium eurypylus*. There were also larvae and pupae of *Protographium leosthenes*, the former also feeding on the fresh foliage of *Rauwenhoffia leichhardtii*. These observations highlight the significant differences observed within dry tropical vine thickets at different times of the year - it is hard to imagine the contrast between July and January and southern entomologists would find it very interesting to make a summer visit to northern Queensland.

A NOVEL METHOD OF COLLECTING INSECTS

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During the summer of 1995/96, I saw numerous insects floating in the backyard pool. Many had met their fate during the night and others during the day when either they had sought to quench their thirst and slipped in or had mistakenly landed on an unfriendly surface.

Normally they would have been scooped out with the leaves or let run through into the filter assembly, but with my renewed interest in insects, I took the time to look at what I had passively collected. I realised that here was a veritable harvest of all kinds of flies, beetles, moths, etc.

I noted the many species of moths, wasps and flies floating with their wings in the open position; in the manner, I noted, in which they are normally mounted in collections. The problem I soon discovered was how to retrieve them in those perfect layouts. When picked out of the water, they invariably collapsed into soggy lumps with wings fouled and of course, when they dried out, they 'came back to life again' and moved around.

My first thoughtful attempt to retrieve them in good position and condition was achieved by making a small flat net of terylene curtain material, tied onto a small hoop of stainless steel wire about 50mm diameter. Beetles and flies were picked off the water surface by the net and put into a bottle with absorbent paper (blotting, news, or toilet paper) and allowed to dry out and return to the land of the living - whereupon I would euthanate them with a small piece of rolled paper soaked in ethyl or amyl acetate. Each was then placed in a phial with name tag and allowed to dry out. I am not yet in the habit of pinning them early (thus I expect some trouble later if I do not rehydrate them).

My 'recovery room' is made from a 'peanut butter' jar with a piece of fly-wire covering a hole in and fused/hot glued into the plastic lid. Recovery is important, because if you were to try to pin them while wet, it could be a difficult operation; far better to let them take on their natural form and then dead 'em.

My first experiment with a moth which was presenting itself in beautiful display on the water was a problem. It was not in a comatose state as I discovered when attempting to pick it up in the open condition - by carefully placing the net underneath and allowing the water to drain away and not disturb the spread wings. It fluttered, so back into the water it went to float there in desired display position. I decided to kill it by dropping methylated spirits onto its body; this eventually had the desired effect, although I was concerned that now, the wings were saturated and had lost some of their velvety appearance. I was able then to lift it from the water, thus preserving its outspread wing positions and pin it through the thorax.

The moth (and the net) were left to dry out completely, after which I was able to pick up the pin with the moth and its spread wings; the velvety surface more or less returned to original condition. It was not a bad first attempt and the technique will improve as I continue to experiment. I collected a Damsel Fly (although it was dead, not comatose) in a like manner and pinned it with its wings suitably spread for drying on a grooved foam plastic block.

I do not know whether this is a practiced collection methodology, but I can assure you, if you look into a pool in the morning, you will be pleasantly surprised with what you have caught through no real effort on your behalf. Remember, even though the insects look dead when you pick them out, they may well come alive when dry - so be careful to contain them or they will fly away and be lost.

As a spinoff to this collecting method, you can record the period for swarming of different insects such as termites, small black beetles, moths, wasps, etc.

I welcome any comments on collecting and curating techniques.

THE SWORD-GRASS BROWN BUTTERFLY HABITAT RESTORATION PROJECT
(and butterfly list for Wicks Reserve at The Basin, Vic.)

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In 1993 the Knox Environment Society (KES) and the City of Knox became concerned about the future of two fragmented populations of the Sword-grass Brown butterfly (*Tisiphone abeona albifascia*) still lingering in the eastern Melbourne suburbs of Boronia and The Basin. In response, the Sword-grass Brown Butterfly Habitat Rehabilitation Project (SGBBHRP) was launched. The two important aims of the KES scheme are to link the two remaining extant butterfly populations within the Knox Shire, and to increase awareness of the need to conserve this graceful butterfly, its habitat and other butterfly species with which it co-exists within the Shire. Although largely extirpated from metropolitan areas the species is not under threat in natural habitat where, in Victoria, I have encountered it from sea level (eg. Walkerville) up to an altitude of at least 1372m at the Mount Buffalo Chalet. The known state distribution is provided (figure 1) and for the national map refer to Dunn & Dunn (1991).

Within Knox Shire the butterfly retains a strong foot-hold in Wicks Reserve. This reserve, located at The Basin and situated about 160m above sea level (a.s.l.), is a small recreational area surrounded by scrubby eucalypt open forest. Here a variety of satyrine butterflies are still to be seen with regularity. I first encountered the Sword-grass Brown breeding here in early 1983 and, some four years later, was surprised to discover several adults of the localized Silky Hairstreak butterfly, *Pseudalmenus chlorinda* (see Anon. 1987) flying about the taller Blackwood trees during spring. Over several visits I compiled a list of 24 varieties which comprises those butterfly species confronted without determined searching. In addition, The Basin record of *Ocybadistes walkeri* by Crosby & Dunn (1989) came from this reserve.

The nearby Old Joes Creek Retarding Basin (ca. 120m a.s.l.) at Boronia, is also remnant butterfly habitat within the Knox Shire. Here, the Sword-grass Brown's habitat is severely degraded and the remaining butterfly population is meagre.

In order to help bridge the gap between these two Sword-grass Brown butterfly populations, five other nearby reserves have been planted with natives including nearly 300 Red-fruit saw-sedges (*Gahnia sieberiana*) since the inaugural planting day in October 1994 (KES 1995). Larvae of at least eleven butterfly species (10 of which occur in Victoria) can feed on *G. sieberiana* (Dunn & Dunn 1991), and I have found larvae of a common anthelid moth will also utilise this sedge when grown in residential gardens. Thus, saw-sedge plantations in reserves, supplemented by the odd host plant in residential gardens, will maintain the Boronia satyrine population and, in addition, assist other butterflies and moths invade and colonise suburban areas. This and other rehabilitation work should, in time, establish the desired genetic link between these currently sequestered butterfly populations, and jointly serve to increase species richness and insect biodiversity within otherwise inhospitable landscapes.

The first Sword-grass Brown Habitat planting Day in 1994 was attended by 45 volunteers. Another planting day is scheduled for SATURDAY, 14TH SEPTEMBER 1996, and conservation-minded ESV members/readers may like to participate. Ample stock of the larval host and other native plants have been cultivated and will be available for planting on the day. Restoration work is proposed for Reserve 1 at enr. Army Road & Market Street, Boronia (Melways Ref. 65 B6) and participants are asked to contact Peter Steller (Tel. 9758 8291; or the Knox Environment Society Inc. P.O. Box 336 Boronia 3155) to confirm times and final

meeting details, or for other pertinent information. Volunteers meeting at the reserve should come equipped with mattock and garden gloves.

List of 24 Butterfly Species Seen in Wicks Reserve
(compiled from several visits)

Within suburban Melbourne, comparative lists of butterflies are available for Yarra Bend-Studley Park (16 spp.) (Faithfull 1992), Wattle Park at Burwood (21 spp.) (Braby & Berg 1987, 1989, Faithfull 1989, 1993), a Malvern residential garden (11 spp.) (Carwardine 1993) and La Trobe University-Gresswell Forest in the Bundoora-Macleod area (28 spp.) (Braby 1989). Wicks Reserve is an important link with Melbourne's past as it contains several species potentially lost (eg. *H. paradelpha*) or now very rare (eg. *H. banksii*) at one or more of these metropolitan reserve sites. A minimum of 24 species puts Wieks Reserve on par with these other sites and, without doubt, other speeies (resident or otherwise) are sure to be added from time to time.

HESPERIIDAE
Trapezites symmomus
Dispar compacta *
Signeta flammeata *
Toxidia doubledayi
Hesperilla donnysa
H. ornata
Taractrocera papyria
Ocybadistes walkeri

NYMPHALIDAE
Argynnina cyrila
Geitoneura acantha *
G. klugii *
Heteronympha merope *
H. paradelpha
H. penelope *
H. banksii *
Oreixenica lathoniella *
Tisiphone abeona *
Vanessa kershawi
V. itea

PIERIDAE
Delias harpalyce
Pieris rapae *

LYCAENIDAE
Pseudalmenus chlorinda
Candalides hyacinthinus
*Zizina labradus**

* The 11 species marked, I have also seen at Old Joes Creek Retarding Basin or other areas in Boronia. In addition, there are specimens of *T. papyria* (1941) and *H. merope* (1956) from Boronia held in the Museum of Victoria and, without doubt, both species would still survive within this residential area.

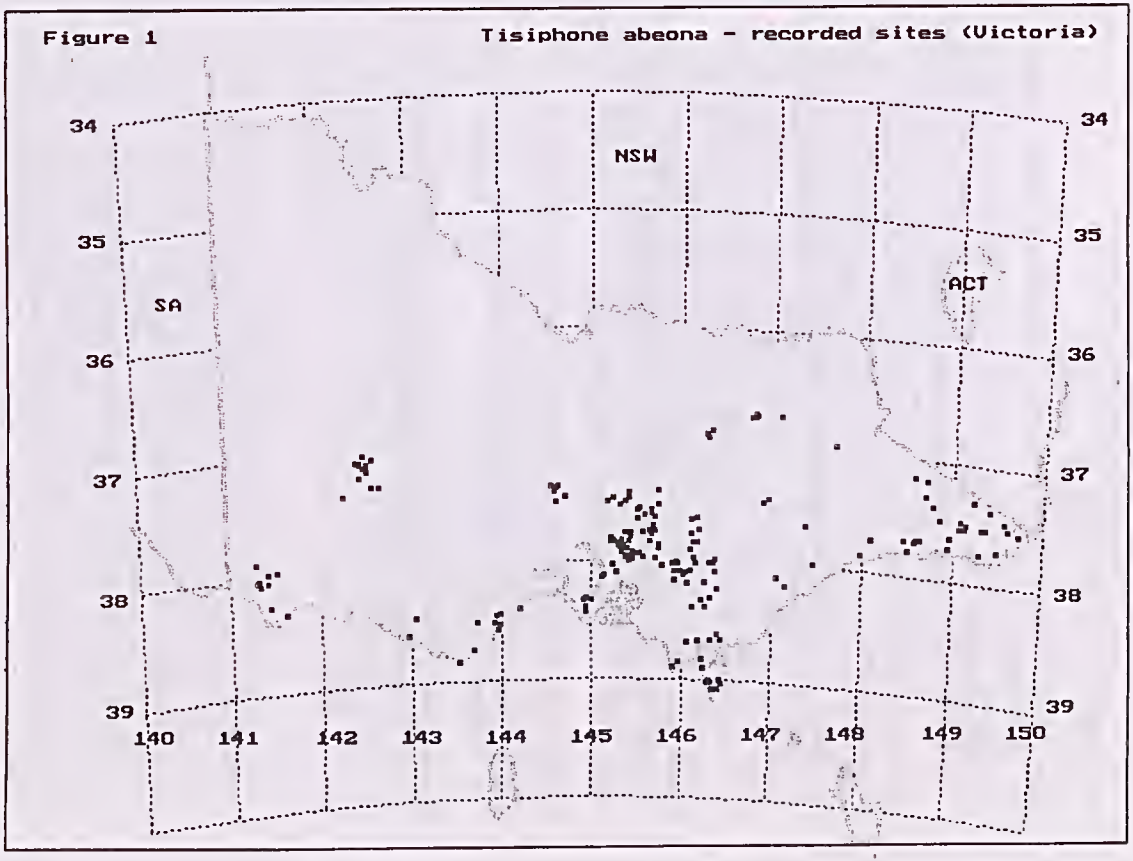

Figure 1 - Known distribution of *T. abeona* in Victoria

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RECENT ARTICLES OF INTEREST

Compiled by Ian Faithfull

Sagliocco, J-L. & Coupland, J.B., 1995. Biology and host specificity of *Chamaesphecia mysiniformis* (Lepidoptera: Sesiidae), a potential biological control agent of *Marrubium vulgare* (Lamiaceae) in Australia. *Biocontrol Science and Technology* 5: 509-15. Larvae of this clearwing moth, a native of the Iberian Peninsula, feed inside horehound roots.

Barker, S., 1995. Eight new species of Australian Buprestidae (Insecta: Coleoptera). *Transactions of the Royal Society of South Australia* 119(4):149-56. New species described from Qld, WA, NT, with whole body illustrations. *Castiarina* spp.: *C.corallina*, *C.ernestadamsi*, *C.euknema*, *C.octopunctata*, *C.oedemerida* and *C.prolata*; *Themognatha viridescens* and *Astraeus powelli*. Barker continues his practice of naming some species after their collectors.

Turner, J.R. & Hawkeswood, T.J., 1994. Observations on the biology and host plants of *Dinocephalia cyaneipennis* (Blackburn) (Coleoptera: Buprestidae) from New South Wales, Australia. *Giornale italiano di Entomologia* 7:87-96. Larvae form stem galls in *Allocasuarina* spp. Data on gall abundance, size and orientation (exposed to afternoon sun), habitat, summary of larval host plants, etc.

Turner, J.R. & Hawkeswood, T.J., 1994. A note on the larval host plant and biology of *Melobasis apicalis* Macleay (Coleoptera: Buprestidae) from Australia. *Giornale italiano di Entomologia* 7:97-102. Larvae form stem galls in *Bossiaea rhombifolia* (Fabaceae); summary of larval hosts for *Melobasis*.

Hawkeswood, T.J. & Turner, J.R., 1994. A new species of the genus *Ethon* Laporte & Gory, with observations on its biology and host plants (Coleoptera: Buprestidae). *G.it.Ent.* 7:165-79. *E. jessicae* forms stem galls in *Dillwynia* and *Pultenaea* spp. (Fabaceae). Key to and illustrations of 6 NSW *Ethon* spp. Description of galls and analysis of gall contents; comparison of galls of *E.jessicae*, *E.affine* and *E.fissiceps*. Summaries of larval and adult foodplants of *Ethon* spp.

Potts, S. & Kennedy, C., 1996. Forgotten forest creatures. *Habitat* (Australian Conservation Foundation) 24(2):8-11. If "we don't even know what is in the forest, how can we predict the impact of disturbances like logging and regeneration burning"? Forest invertebrates are poorly known and threatened by logging. In the 67,000 insects, spiders and mites collected by H.Recher and J.Majer in the canopies of four *Eucalytpus* spp. at Sydney and Perth there were 1659 sp. of which more than 95% were undescribed or new to science. Each euc. sp. had a distinct fauna with ca. 250 invertebrate spp. on leaves alone. This data leads to a quadrupling of the estimated total invert.spp.in Australia to 1 million. A study at Wog Wog, NSW, found >500 spp. of Coleoptera with 50 new spp. of Aleocharine rove beetle, plus 74 ant spp. New spp. of Onychophora in Coolangubra State Forest may be endemic to the site. Some errors e.g. "The Carabidae are flightless and nocturnal. They depend on tree cover and cannot survive in open or cleared habitats."

Recher, H.F., Majer, J.D. and Ganesh, S., 1996. Seasonality of canopy invertebrate communities in eucalypt forests of eastern and western Australia. *Australian Journal of Ecology* 21: 64-80. Chemical knockdown sampling. Arthropods more abundant on E Aust. trees (*E.creba*, *E.moluccana*) than W (*E.marginata*, E.calophylla) during the year sampling

took plaee. Comparisons of data for two years in WA shows that variability of numbers can be as great between years as between seasons.

Doeg, T.J., 1995. An assessment of the aquatic macroinvertebrate fauna in the Grampians National Park. Department of Conservation and Natural Resources, National Estate Grants Program Projeet No.913.

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Yen, A.L., Horne, P.A. & Kobelt, A.K., 1995. Invertebrates of the Victorian basalt plains grasslands. Museum of Vietoria, Melbourne. National Estate Grants Program Projeet No.122, 1993-94.

Sharpe, L., 1996. Creepy crawly crunchies. *Zoo News* (The Magazine of Friends of the Zoo) 16(2):14 (reprinted from *Healesville Sanctuary Tracks*). Keepers Barry Krueger and Byron Manning of the food produetion area of Healesville Sanctuary provide meals for some 2000 animals every day of the year. The Sanetuary eultures African plague locusts (300 adults per week), field erickets, earthworms and bushflies (1 to 4 kg of pupae harvested per week using a flotation method) to feed a range of mammals, birds, amphibians and reptiles. (er D.Dobrosak)

Mt.Piper update or more news on other rare invertebrates. *Indigenotes* (Indigenous Flora & Fauna Assoc.) 9(5):11-2, May 1996 (reprinted from *Broadford Environmental Action Movement (BEAM) Newsletter* No.2, April/May 1996). The ant associated with *Acrodipsas myrmecophila* (Lycaenidae) was located on private land on the E slopes of the Mt last year. The land has been aequired by the government. Brood ehambers installed by Tim New and his team have been occupied by the ants and can be used to monitor larvae of the small ant blue. Larvae of *A.brisbanensis* are yet to be found. The Mt is likely to be made a Flora and Fauna Reserve.

Hunt, P., 1996. New aphid fungus hope. *Weekly Times* 29 May p.22. John Curtis, working at Knoxfield, has developed a new insecticide using the fungus *Vertieillium lecanii* as a spray formulation for control of the green peaeh aphid, *Myzus persicae*.

Ryan, K., 1996. Bugs to wage war on farmers' curse. *Sunday Herald Sun*, 2 June, p.20. Two weevils introduced to control the weed Paterson's curse were released around Victoria in May. The erown borer, *Mogulones larvatus*, and the root borer, *M. geographicus*, have only generation per year and their larvae do most of the damage.

Thanks to S.Barker, D.Dobrosak, T.Hawkeswood, J.Weiss for artieles mentioned.

Material suitable for inclusion in "Recent Artieles of Interest" may be forwarded to the compiler at 5/30-32 Finlay Street, Frankston, Vie., 3199. Of particular interest is the more ephemeral entomological literature: articles in local newspapers, pamphlets, etc., and material with direct relevanee to entomology in Vietoria.

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The Society welcomes contributions of articles, papers or notes pertaining to any aspect of entomology for publication in this Bulletin. Contributions are not restricted to members but are invited from all who have an interest. Material submitted should be responsible and original. The Editor reserves the right to have articles refereed. Statements and opinions expressed are the responsibility of the respective authors and do not necessarily reflect the policies of the Society.

Contributions may be typed on A4 paper or *preferably* sent to the Hon. editor on an IBM formatted disk in *Microsoft Word for Windows, WardPerfect* or any recognised word processor software with an enclosed hard copy. Contributions may also be E-mailed to Internet address: dobrosak@werple.net.au When E-mailing, indicate italicised or underlined text by including a suitable ASCII character (e.g.*) before and after the relevant text or preferably send files as "uuencoded" text.

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CONTENTS

DIARY OF COMING EVENTS

Friday 16 August - Excursion
to Museum of Victoria's Abbotsford Annex
(refer to page 63 for details)

Saturday 31 August, 11 am, excursion to view David Holmes collection
at 33 Fig Street, Dromana. Details on page 63

20 September - Council Meeting

Friday 18 October - General Meeting
Talk by Pat and Mike Coupar on "Raising Butterflies and Moths"

15 November - Council Meeting

Scientific names contained in this document are *not* intended for permanent scientific record, and are not published for the purposes of nomenclature within the meaning of the *International Code of Zoological Nomenclature*, Article 8(b). Contributions are not refereed, and authors alone are responsible for the views expressed.

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